

CLAIMS:

1 1. A method of receiving signals, said method comprising:
2 changing filtering characteristics on a main signal path as a function of at least
3 one amplitude in an adjacent band relative to a frequency band of operation on said
4 main signal path.

1 2. The method of claim 1 wherein said changing comprises:
2 using an amplitude in said frequency band of operation on said main signal
3 path to change said filtering characteristics on said main signal path.
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1 3. The method of claim 1 comprising:
2 receiving analog signals on said main signal path;
3 producing a replica of said analog signals on a band edge detection path;
4 dividing said analog signals on said band edge detection path onto an upper
5 edge detection path and a lower edge detection path;
6 producing an upper edge amplitude for said analog signals at an upper edge
7 relative to said frequency band of operation on said upper edge detection path and a
8 lower edge amplitude for said analog signals at a lower edge relative to said frequency
9 band of operation on said lower edge detection path.

1 4. The method of claim 2 comprising:
2 providing a replica of said analog signals on a detection path
3 producing an amplitude for said analog signals in said frequency band of
4 operation on said detection path; and
5 changing said filtering characteristics of said filter on said main signal path
6 based on a comparison between said at least one amplitude for said adjacent band and
7 said amplitude for said frequency band of operation.

1 5. The method of claim 1 wherein said changing comprises:

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2 switching as a function of said at least one amplitude for said adjacent band
 3 between a plurality of filters having different filtering characteristics.

1 6. The method of claim 3 wherein said receiving and producing
 2 comprises:
 3 receiving analog signals at radio frequency on said main signal path; and
 4 producing a replica of said radio frequency analog signals on a band edge
 5 detection path.

1 7. The method of claim 1 wherein said changing comprises:
 2 narrowing a bandwidth for a filter on said main signal path to attenuate signals
 3 on at least one band edge of said frequency band of operation.

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1 8. A method of receiving signals, said method comprising:
 2 changing filtering characteristics on a main signal path at at least one band
 3 edge of a frequency band of operation of a receiver depending on at least one
 4 amplitude for signals not under the control of said receiver.

1 9. The method of claim 8 wherein said changing comprises:
 2 using an amplitude of said frequency band of operation on said main signal
 3 path.

1 10. The method of claim 8 comprising:
 2 receiving analog signals on said main signal path;
 3 producing a replica of said analog signals on a band edge detection path;
 4 dividing said analog signals on said band edge detection path onto an upper
 5 edge detection path and a lower edge detection path;
 6 producing an upper edge amplitude for said analog signals at an upper edge
 7 relative to said frequency band of operation on said upper edge detection path and a

8 lower edge amplitude for said analog signals at a lower edge relative to said frequency
9 band of operation on said lower edge detection path.

1 11. The method of claim 10 comprising:
2 providing a replica of said analog signals on a detection path
3 producing an amplitude for said analog signals in said frequency band of
4 operation on said detection path; and
5 changing said filtering characteristics of said filter on said main signal path
6 based on a comparison between said at least one amplitude for said signals not under
7 the control of said receiver and said amplitude for said frequency band of operation.

1 12. The method of claim 8 wherein said changing comprises:
2 switching as a function of said at least one amplitude for said signals not under
3 the control of said receiver between a plurality of filters having different filtering
4 characteristics.

1 13. The method of claim 10 wherein said receiving and producing
2 comprising:
3 receiving analog signals at radio frequency on said main signal path; and
4 producing a replica of said radio frequency analog signals on a band edge
5 detection path.

1 14. The method of claim 8 wherein said changing comprises:
2 narrowing a bandwidth for a filter on said main signal path to attenuate signals
3 on at least one band edge of said frequency band of operation.

1 15. A band edge amplitude reduction system for a receiver comprising:
2 a variable filter on a main signal path; and

3 processing circuitry changes filtering characteristics of said variable filter as a
4 function of at least one amplitude for an adjacent band and/or signals not under the
5 control of said receiver.

1 16. The system of claim 15 wherein said processing circuitry changes said
2 variable filter characteristics on said main signal path as a function of at least one
3 amplitude for said adjacent band and/or said signals not under the control of said
4 receiver and an amplitude for said frequency band of operation on said main signal
5 path.

1 17. The system of claim 15 comprising band edge detection circuitry
2 comprising:
3 a band edge detection path receives a replica of analog signals on said main
4 signal path;
5 a signal divider divides said analog signals on said band edge detection path
6 onto an upper edge detection path and a lower edge detection path; and
7 detection circuitry receives said signals on said upper edge detection path and
8 said lower edge detection path and produces to said processing circuitry an upper edge
9 amplitude for said analog signals at an upper edge relative to said frequency band of
10 operation and a lower edge amplitude for said analog signals at a lower edge relative
11 to said frequency band of operation.

1 18. The system of claim 16 comprising:
2 a detection path receives a replica of said analog signals from said main signal
3 path;
4 detection circuitry receives said analog signals from said detection path and
5 produces an amplitude for said analog signals in said frequency band of operation on
6 said detection path; and

7 said processing circuitry changes said filtering characteristics of said filter on
8 said main signal path based on a comparison between said at least one amplitude for
9 said adjacent band and/or said signals not under the control of said receiver and said
10 amplitude for said frequency band of operation.

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1 19. The system of claim 15 wherein said processing circuitry produces
2 control signals to change said filtering characteristics of said variable switch by
3 switching between a plurality of filters having different filtering characteristics as a
4 function of said at least one amplitude for said adjacent band and/or said signals not
5 under the control of said receiver.

1 20. The system of claim 15 wherein said processing circuitry produces
2 control signals to narrow a bandwidth for said variable filter on said main signal path
3 to attenuate signals on at least one band edge of said frequency band of operation.